

Service Manual

ViewSonic VE170 & VE170b

Model No. VLCDS22034-1

VLCDS22034-1b

17" Color TFT LCD Display



(VE170B_SM_182 - Rev. 1 - December 2000)

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Revision History

Revision	Date	Description Of Changes	Approval
1.0	12/7/00	Initial Issue – DCN988	T. Sears

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1. PRECAUTION AND NOTICES

1.1. SAFETY PRECAUTIONS

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as to the user. Carefully go over the following WARNINGS before installing and keep this guide handy.

WARNINGS:

- ◆ This monitor should be operated only at the correct power sources indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your residence, consult your local dealer or power company.
- ◆ Use only the special power adapter that comes with this monitor for power input.
- ◆ Do not try to repair the monitor yourself as it contains no user-serviceable parts. This monitor should only be repaired by a qualified technician.
- ◆ Do not remove the monitor cabinet. There is high-voltage parts inside that may cause electric shock to human bodies, even when the power cord is unplugged.
- ◆ Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- ◆ Put your monitor only in a clean, dry environment. If it gets wet, unplug the power cable immediately and consult your service technician.
- ◆ Always unplug the monitor before cleaning it. Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.
- ◆ Keep the monitor away from magnetic objects, motors, TV sets, and transformer.
- ◆ Do not place heavy objects on the monitor or power cord.

1.2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltages, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

1.3. SERVICE NOTES

1. When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.
2. When replacing a high wattage resistor (more than 1W of metal oxide film resistor) in circuit board, keep the resistor about 5mm away from circuit board.
3. Keep wires away from high voltage, high temperature components and sharp edges.
4. Keep wires in their original position so as to reduce interference.
5. Usage of this product please refer to also user's manual.

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2. SERVICE TOOL & EQUIPMENT REQUIRED

1. SIGNAL GEN.
2. MULTIMETER
3. OSCILLOSCOPE
4. SCREW DRIVER
5. IRON
6. ABSORBER
7. SOLDER
8. DUMMY LOAD ($5\Omega/200W$)

3. SPECIFICATIONS

3.1. PRODUCT SPECIFICATIONS

LCD Panel	17.0" TFT
Power Management	Energy Star compliant VESA DPMS compatible < 3W
Displayable Resolution	SXGA 1280×1024 max.
Pixel Dimension	0.264×0.264mm
LCD Display Color	16.7M Color Max.
Viewing Angle	CR ≥ 10 Horizontal: ±80° Vertical: ±80°
Tilt	+20°, -5°
Contrast Ratio	200 : 1 (min)
Brightness	200 cd/m ² (typ.)
Response Time	Tr: 34 ms Tf: 39ms
Active Display Area	338mm×270mm
Temperature	Operating: 0°C ~ +40°C Storage: -20°C ~ +60°C
Compliance	UL, c-UL, FCC-B, CB report and certificate, ISO13406-2, CE, IC-B(DOC-B), TÜV/GS, TÜV/ERGO, MPR II, TCO99, TCO95 (VE170b), NEMKO, DEMKO, SEMKO, FIMKO, GOST-R (PCT)+20 original copies of Hygienic(BZ02).
Power	Voltage: 100~240 V Consumption: 50 Watts

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3.2. PRIMARY PRESETS & LOOK UP TABLE TIMING

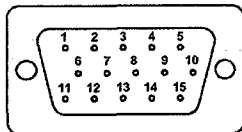
Primary Preset: VESA 1280 x 1024 @ 75Hz

Look up table timing:

1. IND 640 x 350 @ 70Hz, 31.47kHz, +/-
2. IND 720 x 400 @ 70Hz, 31.467kHz, +/-
3. IND 640 x 400 @ 70Hz, 31.469kHz, +/-
4. VESA 640 x 480 @ 60Hz, 31.5kHz
5. MAC 640 x 480 @ 67Hz, 35kHz, composite
6. VESA 640 x 480 @ 72Hz, 37.861kHz, -/-
7. VESA 640 x 480 @ 75Hz, 37.5kHz, -/-
8. VESA 800 x 600 @ 56Hz, 35.156kHz, +/-
9. VESA 800 x 600 @ 60Hz, 37.879kHz, +/-
10. VESA 800 x 600 @ 72Hz, 48.077kHz, +/-
11. VESA 800 x 600 @ 75Hz, 46.875kHz, +/-
12. MAC 832 x 624 @ 75Hz, 49.725kHz, composite
13. VESA 1024 x 768 @ 70Hz, 56.476kHz, -/-
14. VESA 1024 x 768 @ 72Hz, 58.036kHz, -/-
15. VESA 1024 x 768 @ 75Hz, 60.023kHz, +/-
16. MAC 1024 x 768 @ 75Hz, 60.241kHz, composite

3.3. D-SUB CONNECTOR

D-SUB 15 PIN CONNECTOR



1.R	6.GND	11.GND
2.G	7.GND	12.SDA
3.B	8.GND	13.H.SYNC
4.GND	9. +5V	14.V.SYNC
5.NC	10.GND	15.SCL

SIGNAL LEVEL

CONNECTOR	SIGNAL	DESCRIPTION
R	RED	0.7vp-p(VIDEO)
G	GREEN	0.7vp-p(VIDEO)
B	BLUE	0.7vp-p(VIDEO)
H	H/SYNC	TTL positive or negative
V	V/SYNC	TTL positive or negative
SDA	DDC1/2B	TTL
SCL	DDC1/2B	TTL

[illegible]

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FIG.1

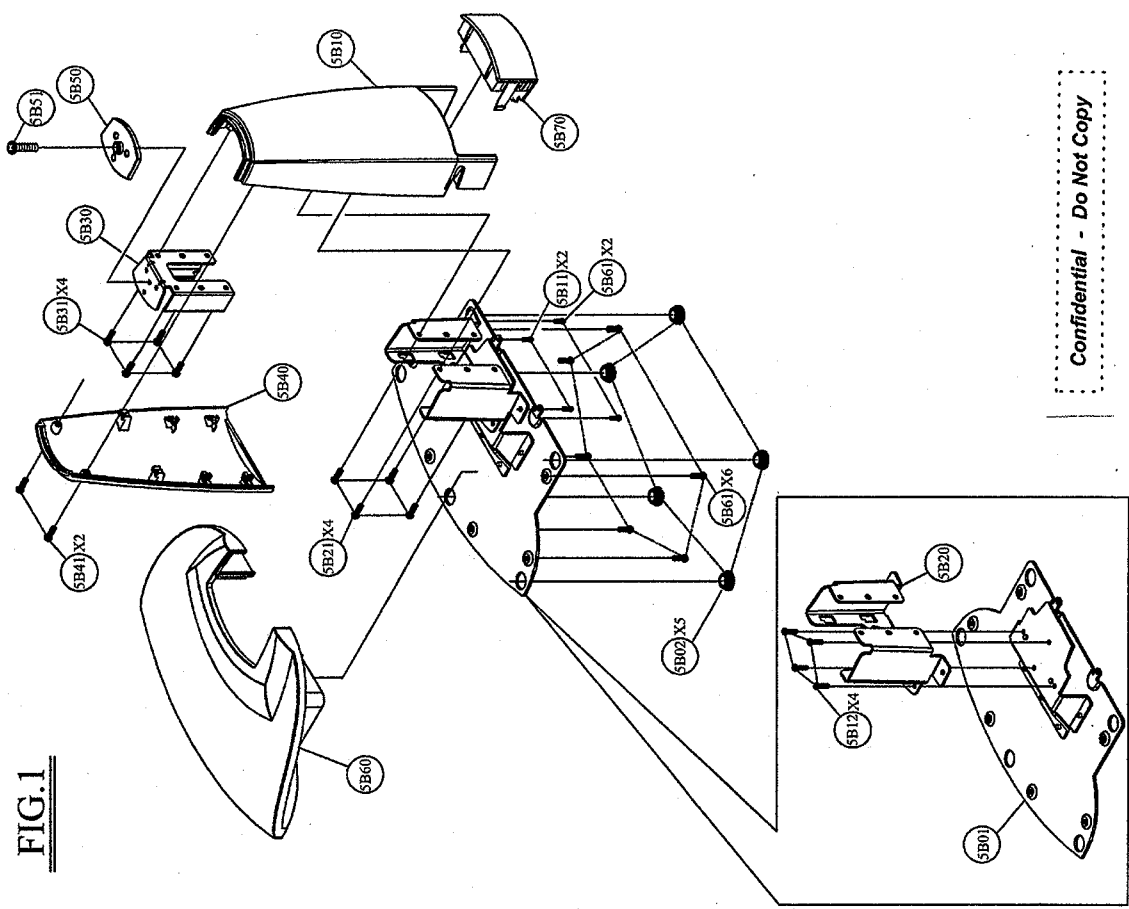


FIG.2

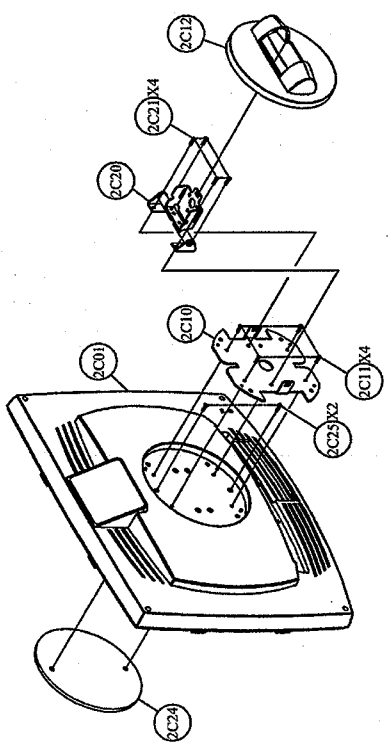
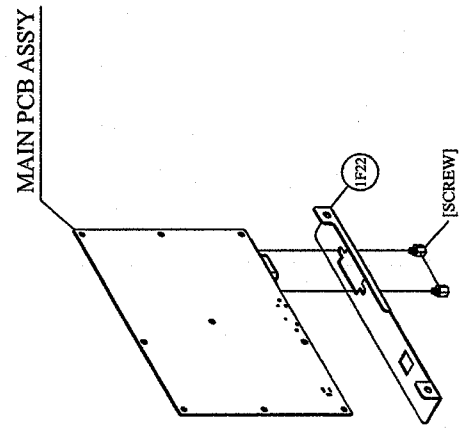


FIG.3



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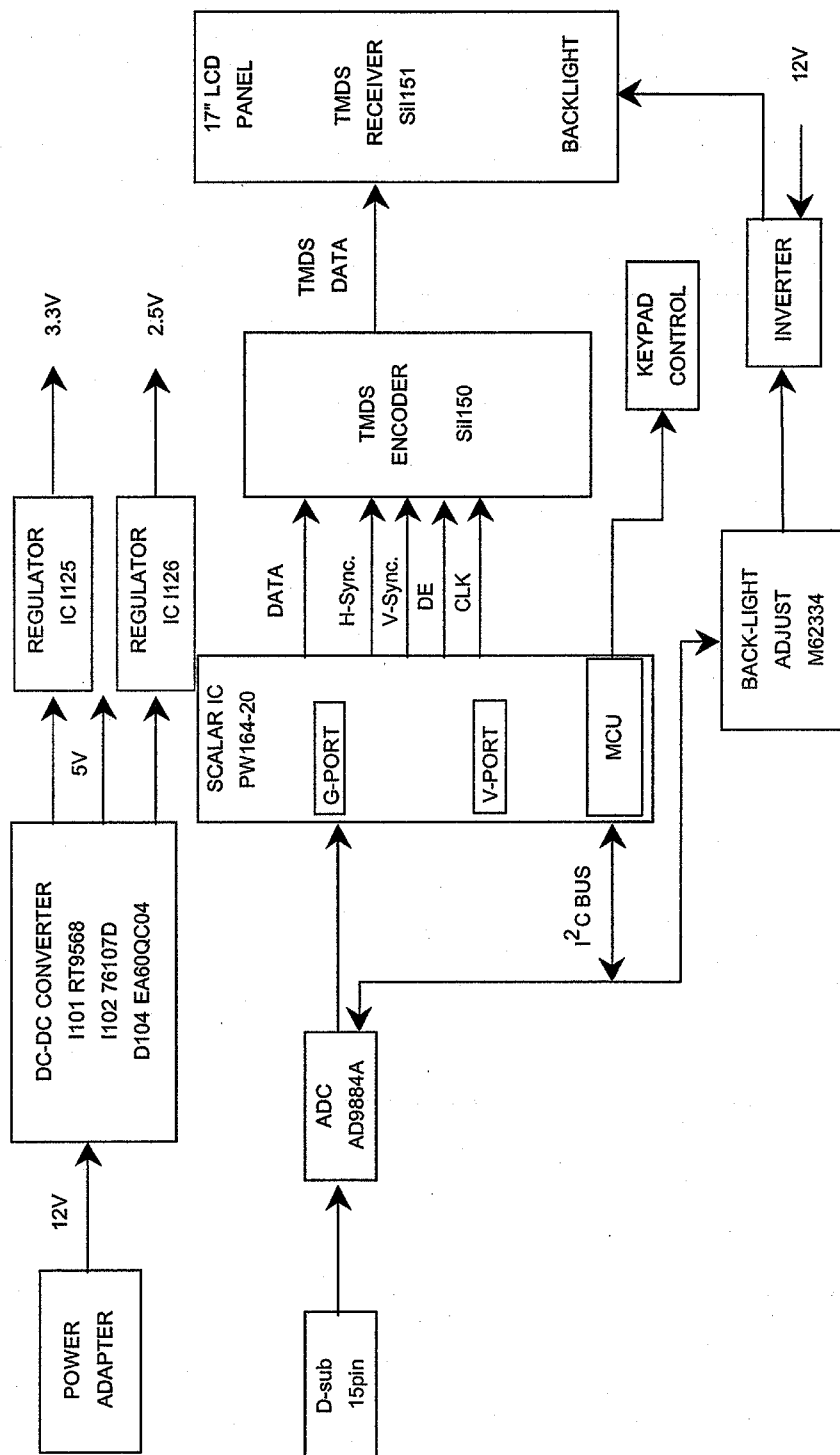
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4.2. EXPLODED VIEW PARTS LIST

Ref. No.	Source	Part No.	DESCRIPTION	SPECIFICATION	Q'TY	REMARK
1F01		2024260601	PANEL	ABS 94HB GY7521 VE170	1	For VE170
1F01		2024260602	PANEL	VE170B ABS 94HB 3U2X	1	For VE170b
1F02		2053750900	LED INDIC.-PWR	PMMA VE170	1	
1F03		2044258701	FUNCTION KEY	ABS 94HB GY7521 VE170	1	For VE170
1F03		2044258702	FUNCTION KEY	VE170B ABS 94HB 3U2X	1	For VE170b
1F04		2051350500	NAME PLATE	M70/M90 VIEWSONIC 3bird LOGO	1	
1F10		2071957500	METAL FITTG	SECC 1.2t SAMSUNG 17" VE170	1	
1F11		2082730126	SCREW,BND+	M3*12 (BND+) WITH NYLOK	4	
1F12		2089151000	BOSS,THREAD	JT178A COPPER M3X27H	6	
1F13		2082730062	SCREW,BND+	M3X6(BND+)	6	
1F14		2071657400	SHIELD PLATE	SPTE 0.3mm VE170	1	
1F15		2082730062	SCREW,BND+	M3X6(BND+)	9	
1F16		2082730062	SCREW,BND+	M3X6(BND+)	2	
1F17		2071657500	SHIELD PLATE	JT178A SPTE 0.3t FOR INVERTER	1	
1F18		2082730062	SCREW,BND+	M3X6(BND+)	4	
1F19		2082730062	SCREW,BND+	M3X6(BND+)	2	
1F20		2082730062	SCREW,BND+	M3X6(BND+)	7	
1F21		2082730062	SCREW,BND+	M3X6(BND+)	3	
1F22		2071957800	METAL FITTG	SECC t=0.8mm	1	
1F23		2082730062	SCREW,BND+	M3X6(BND+)	3	
2C01		2022257401	CABI BACK	ABS 94HB GY7521 VE170	1	For VE170
2C01		2022257402	CABI BACK	VE170B ABS 94HB 3U2X	1	For VE170b
2C02		2082730122	SCREW,BND+	M3X12(BND+)	4	
2C10		2071857700	BRACKET, FIX	SPCC 2t COATING NIKEL VE170	1	
2C11		2085730086	SCREW,B OTW+	M3*8(B OTW+) WITH NYLOK	4	
2C12		2027253201	DUST COVER	ABS 94HB GY7521 VE170	1	For VE170
2C12		2027253202	DUST COVER	VE170B ABS 94HB 3U2X	1	For VE170b
2C20		2106651300	HINGE	26~28KGF-cm -5'-35' SPRING	1	
2C21		2085740106	SCREW,B OTW+	M4*10 (B OTW+) WITH NYLOK	4	
2C22		2085740106	SCREW,B OTW+	M4*10 (B OTW+) WITH NYLOK	3	
2C23		2027251701	DUST COVER	VE150-2 hinge ABS94HB/GY7521	1	For VE170
2C23		2027251702	DUST COVER	VE150B-2 ABS94HB/3U2X hinge-B	1	For VE170b
2C24		2071958000	METAL FITTG	SECC t=1.2mm φ 159	1	
2C25		2082730062	SCREW,BND+	M3X6(BND+)	2	
5B01		2071856700	BRACKET, FIX	FOR STAND SPCC2.5 NICKEL	1	
5B02		2039800901	LEG	RUBBER φ 20X2t white	5	
5B10		2028551001	ARM	VE150-2 ARM-B ABS94HB/GY7521	1	For VE170
5B10		2028551002	ARM	VE150B-2 ABS94HB/3U2X ARM-B	1	For VE170b
5B11		2082730062	SCREW,BND+	M3X6(BND+)	2	
5B12		2085740082	SCREW,B OTW+	SCREW B OTW+ M4X8	4	
5B20		2071856800	BRACKET, FIX	FOR ARM-B SPCC2.0 NICKEL	1	
5B21		2085740082	SCREW,B OTW+	SCREW B OTW+ M4X8	4	
5B30		2071856900	BRACKET, FIX	FOR ARM-T SPCC2.0 NICKEL	1	
5B31		2085740082	SCREW,B OTW+	SCREW B OTW+ M4X8	4	
5B40		2028550901	ARM	VE150-2 ARM-F ABS94HB/GY7521	1	For VE170
5B40		2028550902	ARM	VE150B-2 ABS94HB/3U2X ARM-F	1	For VE170b
5B41		2084730142	SCREW,BND T+	M3X14(BND T+)	2	
5B50		2074158400	HOLDER	VE150-2 hinge support NYLON66	1	
5B51		2082740102	SCREW,BND+	M4X10(BND+)	1	
5B60		2028252701	STAND	VE150-2 ABS94HB/GY7521 STAND-T	1	For VE170
5B60		2028252702	STAND	VE150B-2 ABS94HB/3U2X STAND-T	1	For VE170b
5B61		2084740102	SCREW,BND T+	M4X10(BND T+)	8	
5B70		2027251801	DUST COVER	VE150-2 ABS94HB/GY7521 STAND	1	For VE170
5B70		2027251802	DUST COVER	VE150B-2 ABS94HB/3U2X STAND-B	1	For VE170b
9R70		2074157800	HOLDER	JT166A LED HOLDER TO-05(3.3MM)	1	

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5. BLOCK DIAGRAM

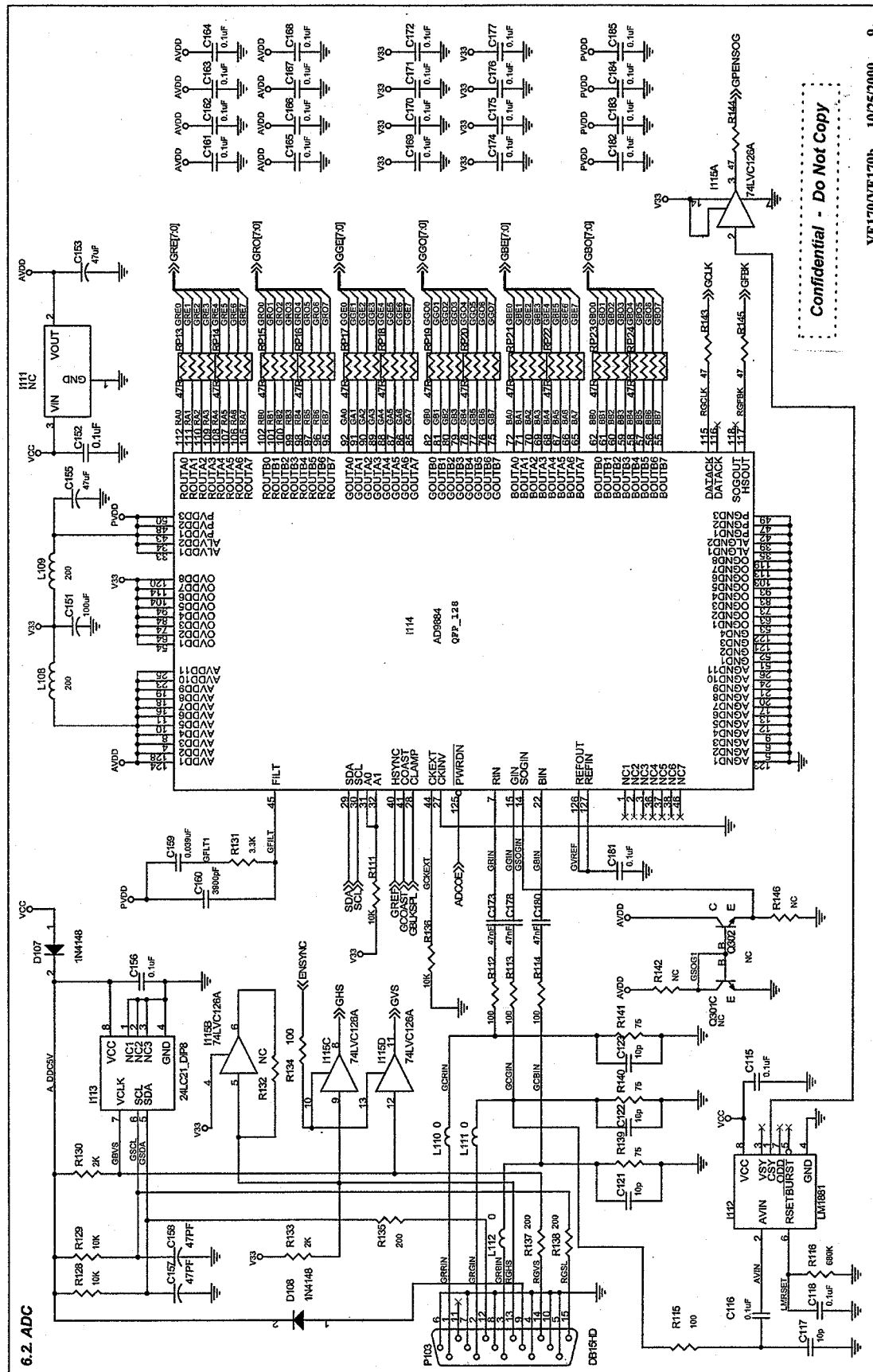


6. SCHEMATIC DIAGRAM

6.1. DC TO DC

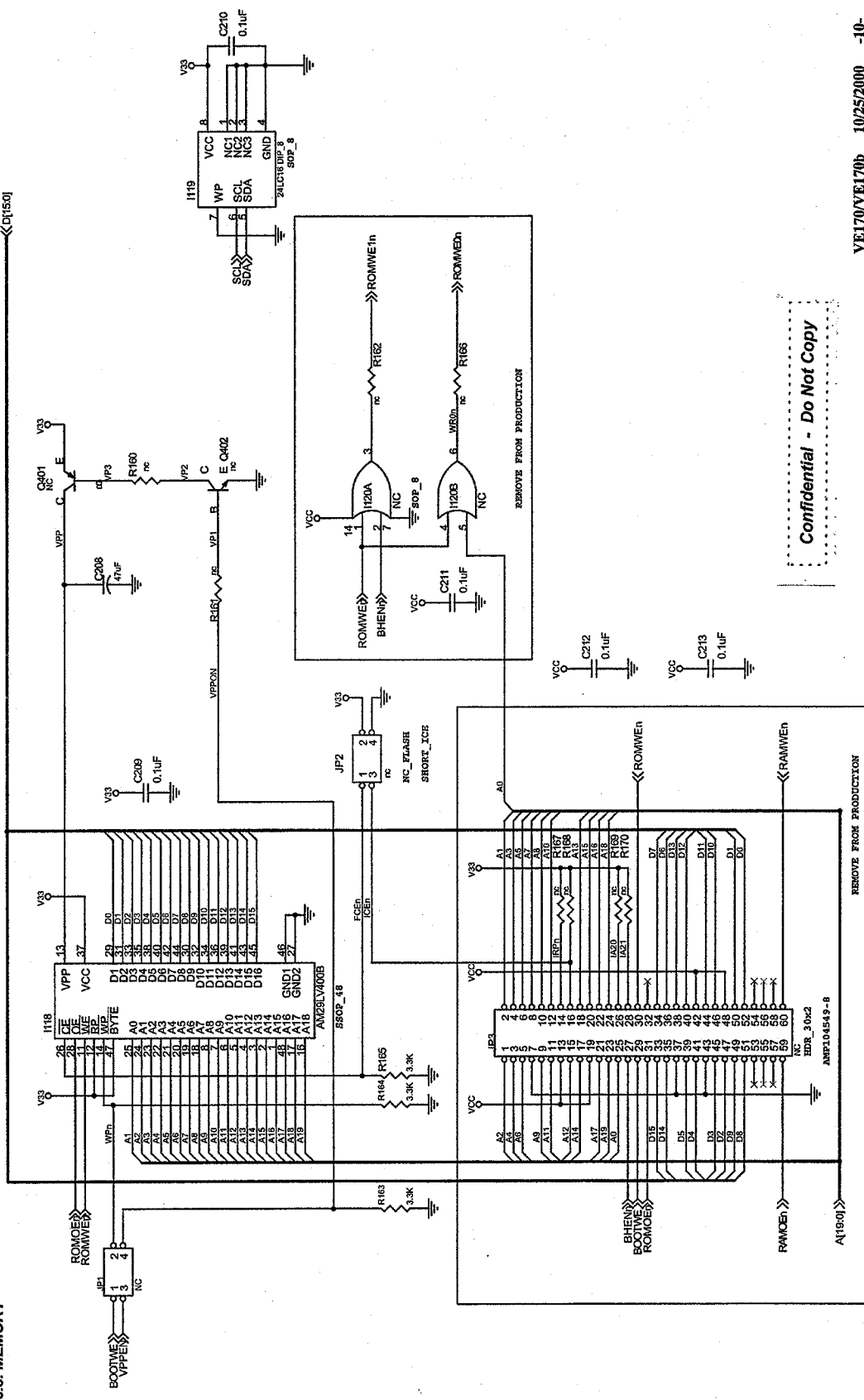
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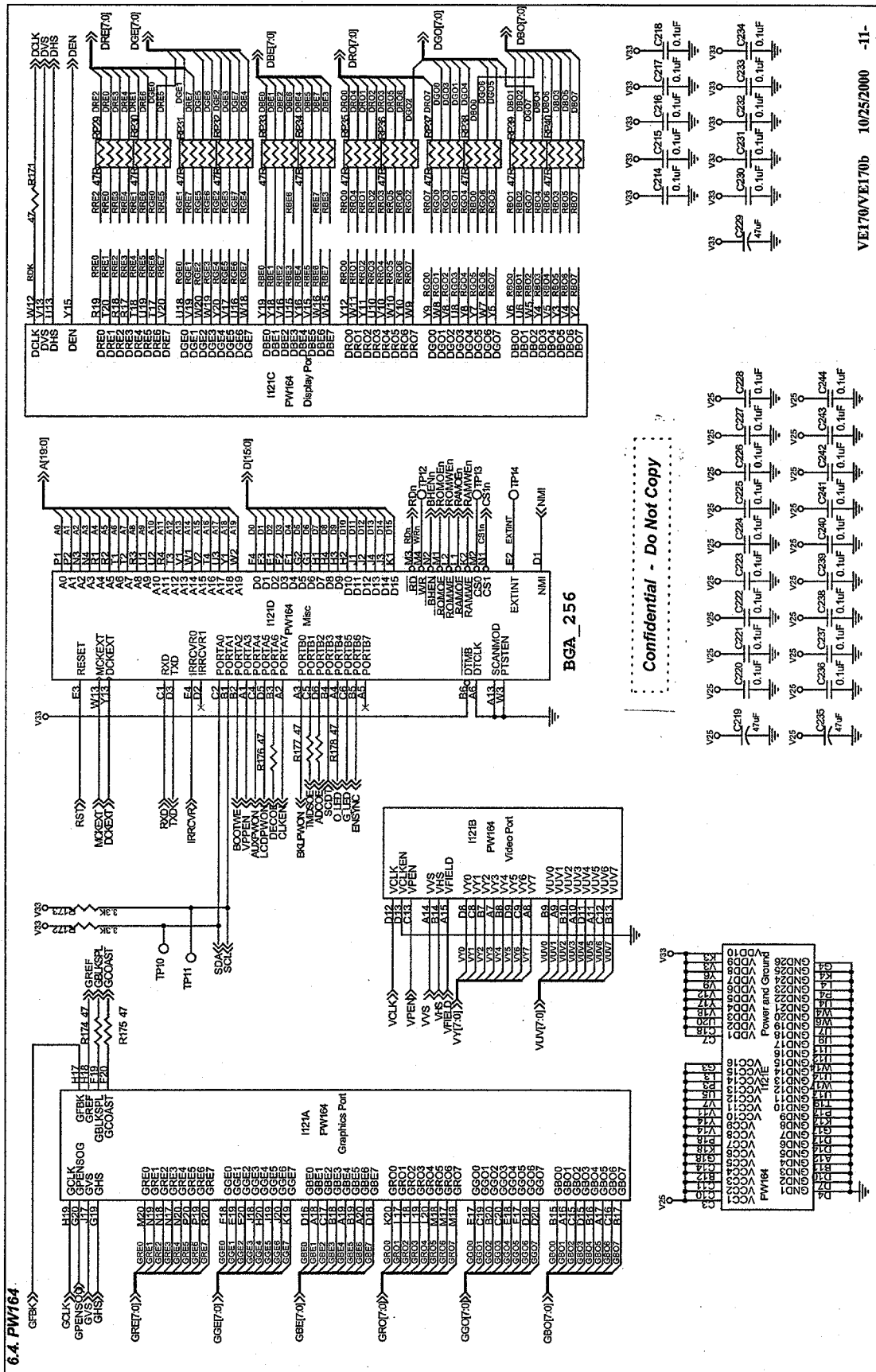


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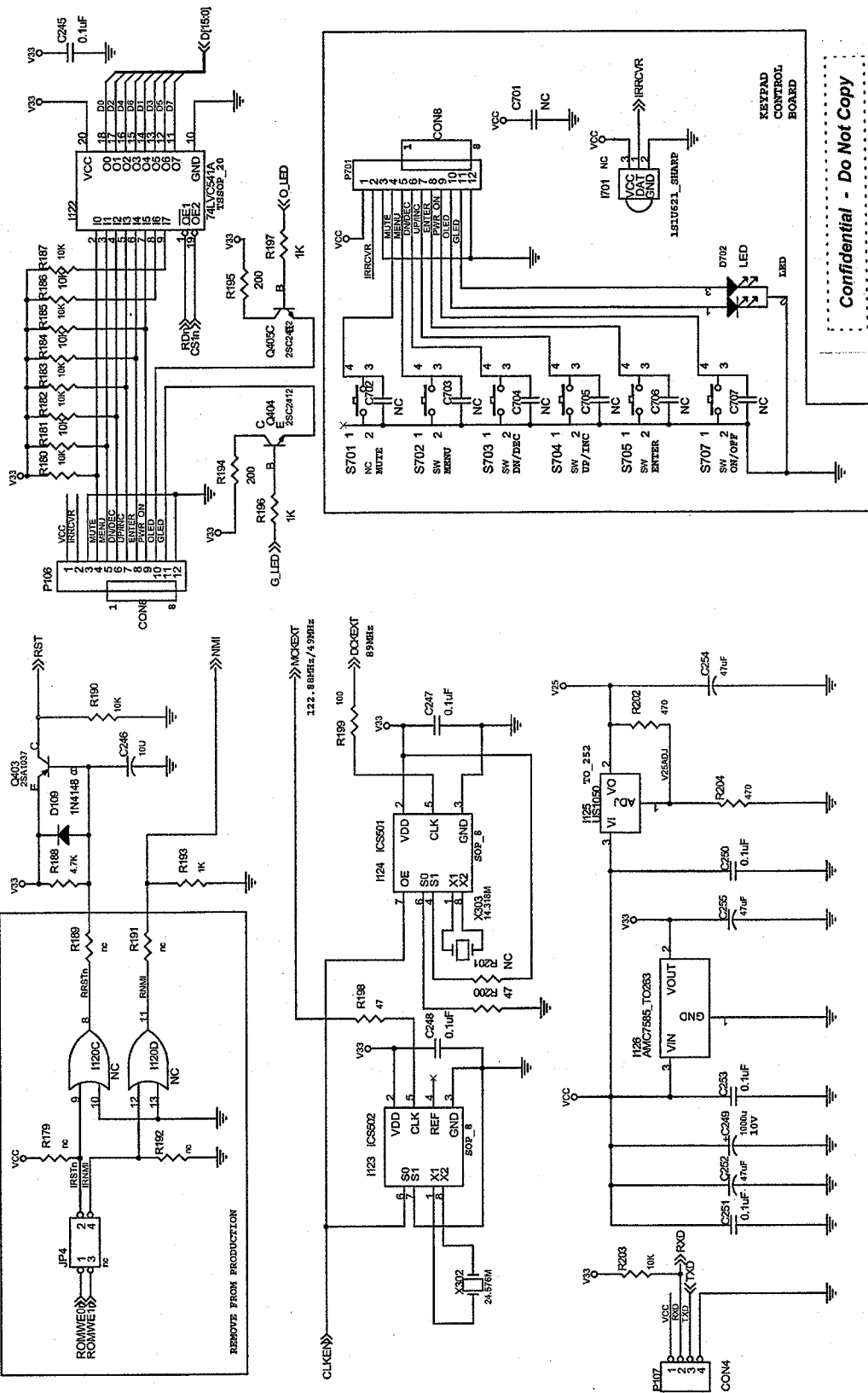
6.3. MEMORY



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6.5. MISC



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6.6. TRANSMITTER

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7. WORKING THEOREM

A. DC-DC CONVERTER

This brick converts the 12V input voltage to 5V for panel use and 3.3V/2.5V for controller use. It consists of a PWM IC (RT9568), switching MOSFET (76107D), flywheel Diode (EC60QC04), buck choke (L102), and capacitor C110.

I101 (RT9568) is a PWM generator working at 90Khz around with an external oscillation capacitor (C108).

It has internal protection circuitry with one external resistor (R101) for current limit.

The output of RT9568 drives Q101/Q102 to turn I102, and C105 provides the boost voltage to turn on I102, and D104 provides the current path while I102 is off.

L102/C110 are to rectify PWM output into DC voltage, and R106/R107 are to sense the DC output, then feed back to error amplifier inside of RT9568, so the DC output can be regulated at the following formula.

$$V_o = 1.25V * (1 + R107/R106)$$

B. A/D converter

The ADC is to convert RGB analog signal to digital signal that scaling chip can acknowledge.

The AD9884A is a complete 8-bit 140Mpsps monolithic analog interface optimized for capturing RGB graphic signal, a +3.3V power supply is necessary. Its 140Mpsps encode rate capability and full-power analog Bandwidth 500Mhz supports display resolutions of up to 1280x1024 at 75Hz.

A clamp signal is generated internally or may be provided through the CLAMP input pin. This device is fully programmable via a two-wire serial port.

The HSYNC input receives a logic signal and provides the frequency reference for pixel clock generation.

The clock generator COAST input may be used to stop synchronizing with HSYNC and continue producing a clock at its present frequency and phase.

The CLAMP logic input may be used to define the time during which the input signal is clamped to GND, establishing a black reference.

When the Power Down control input is bringing to low, AD9884a is put into a very low power dissipation mode, all the output buffers are placed in a high-impedance state.

C. Scaling controller

The scaling IC is to convert the input signal ranging from VGA to SXGA into SXGA resolution that panel can acknowledge.

PW164-20R is an only 3.3v tolerance on all I/O pins and a highly integrated system on a chip. Including an embedded DRAM frame- buffer, a x86 microprocessor and on-screen display memory.

The on-chip 16-bit microprocessor is an optimized x86 compatible processor core with on-chip peripherals (timers, interrupt controller, UART, I/O ports, etc.). Special Infrared (IR) pulse decoders are also included.

The PW164 supports acquisition on one of two input ports, Graphics and Video. The two input ports share a common sync-decoder, and automatic image optimization circuitry.

The Graphic Port can support very high input bandwidth up to 158M Pixels/sec. The Video Port is generally used to support video inputs, and can support input data rates up to 95M Pixels/sec.

The panel interface consists of 48-bit panel data bus, H-sync, V-sync, DE, and GCLK signals.

The AUXPWON signal is to control the supply to panel, LCDPWON signal is to enable chip Si1150 for TMDS signal encoding.

The panel interface also controls the back light inverter, signal BKLPWON is to enable/disable inverter and chip M62334 is for inverter output current control through IIC interface.

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D. INVERTER

In order to drive the CCFLs embedded in the panel module, there is a ROYER inverter to convert the input 12V up to hundreds of AC voltage output.

The inverter is formed by symmetric circuitry, in order to drive the separate lamp modules.

The input stage consists of a PWM controller, buck choke, and switching MOSFET to convert DC input into AC output.

The output stage consists of a tuning capacitor, transformer, push-pull transistor pair to boost ac output up to hundreds of voltage.

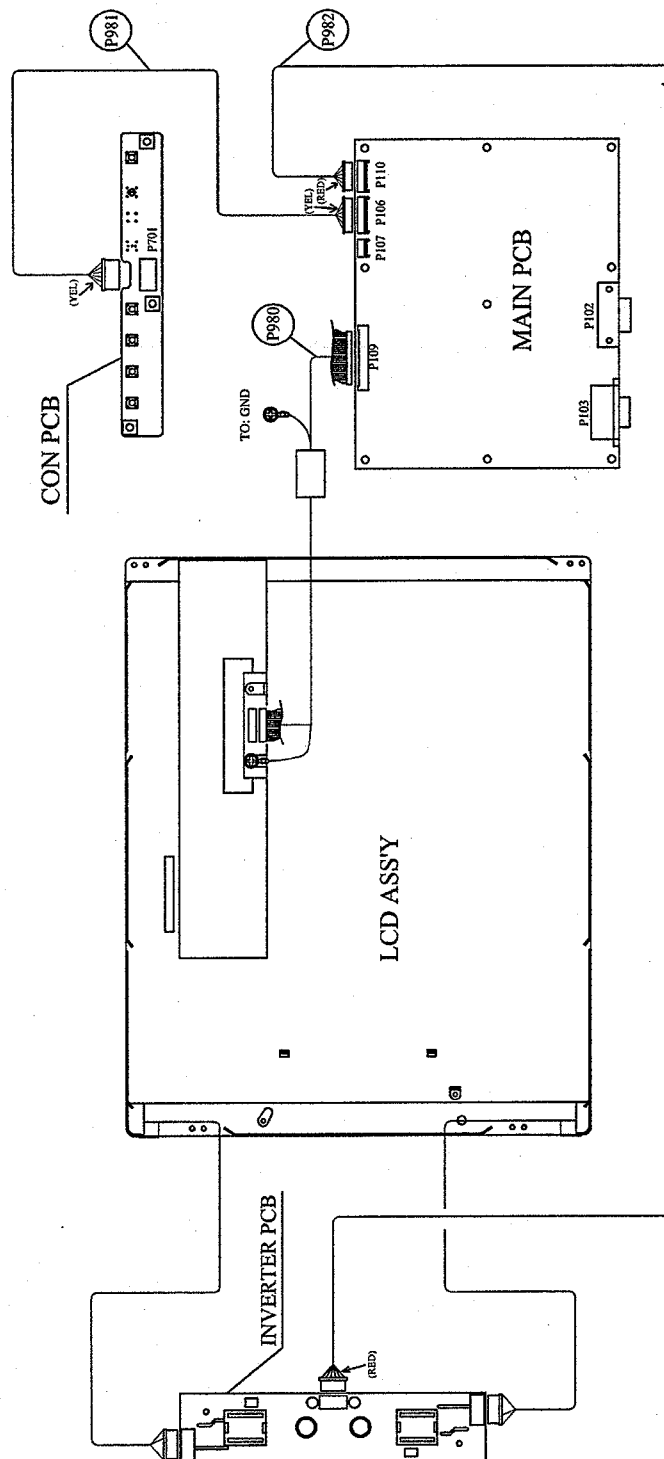
And one resistor is serial to lamp for output current feedback.

A 6-pin connector is the only interface to control the inverter.

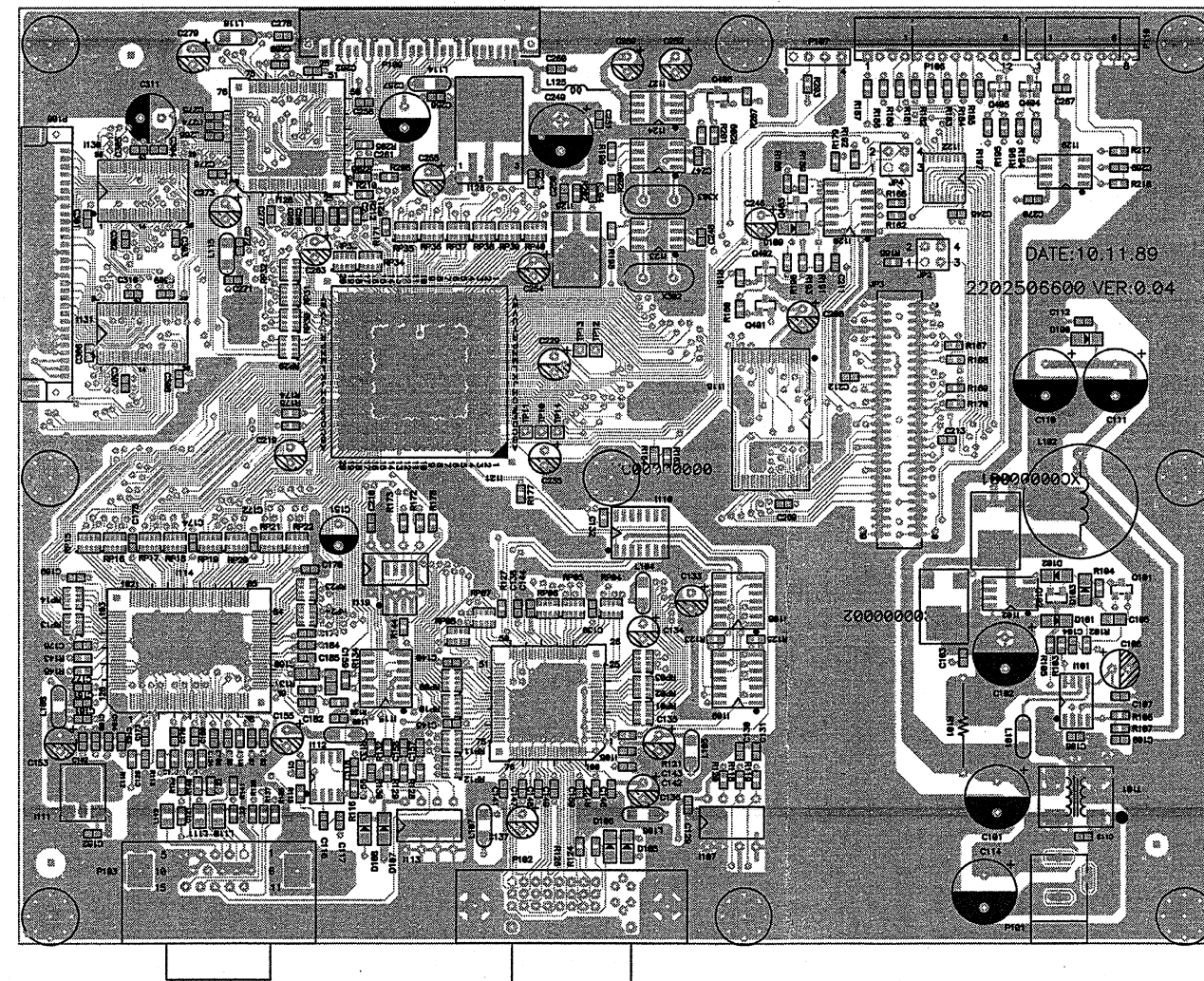
Pin 1/2 is 12V input, pin 5/6 is the returns, pin 4 is the control of output current, and pin 3 is the enable/disable control.

8. WIRING DIAGRAM

(VE170/VE170S)

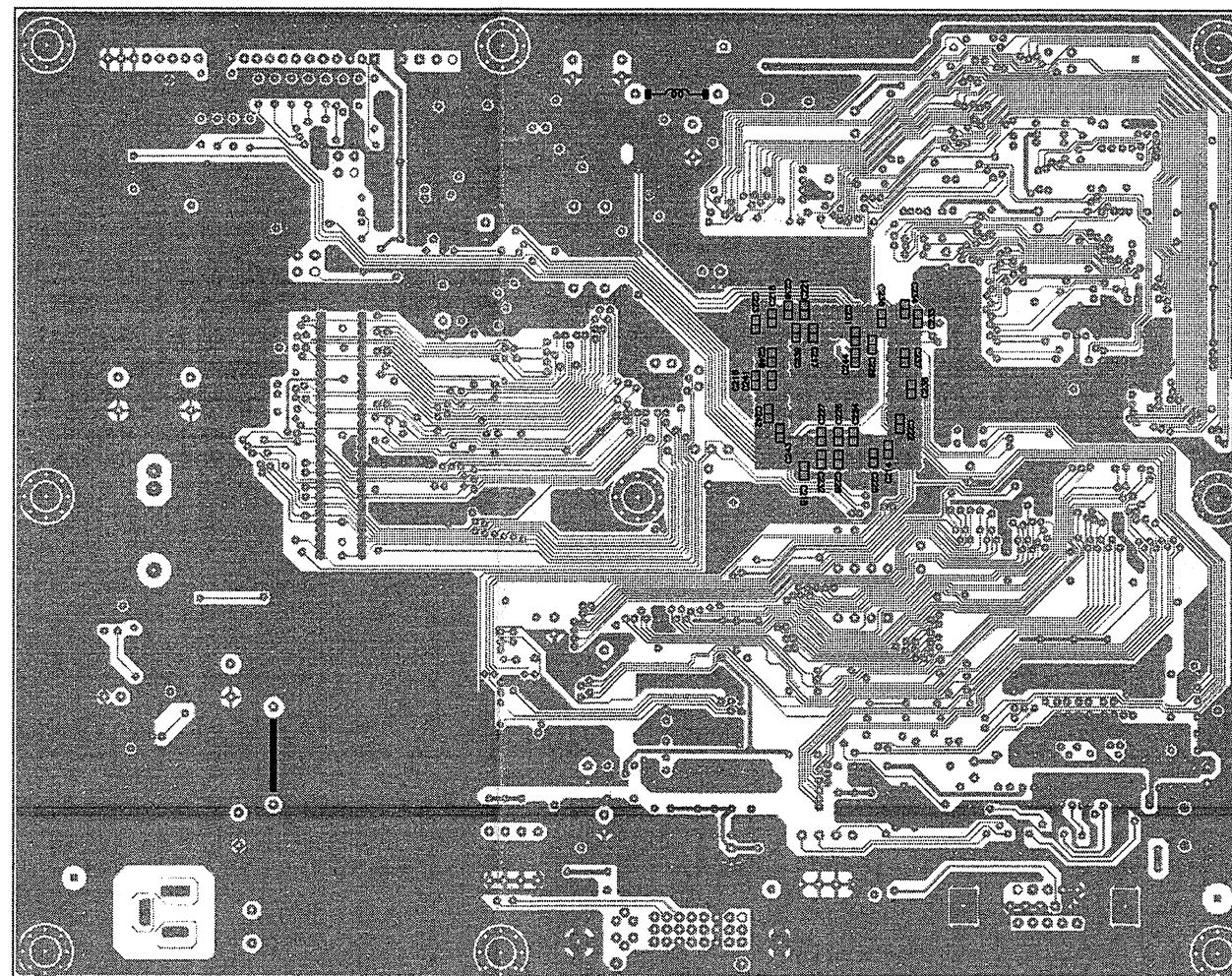


9. PCB LAYOUT
9.1. MAIN PCB TOP VIEW



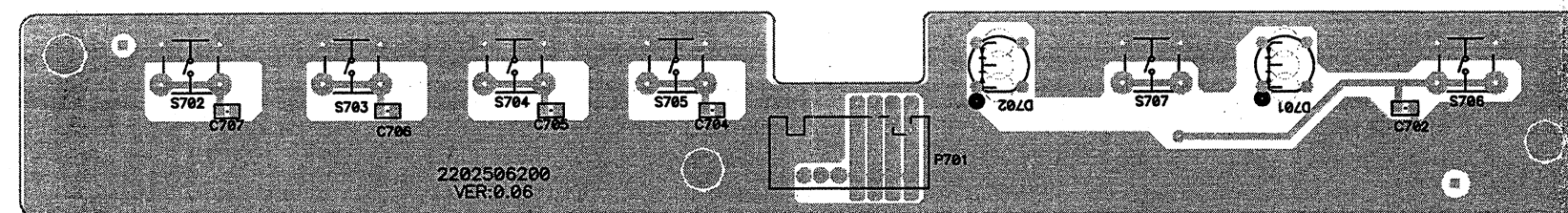
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9.2. MAIN PCB BOTTOM VIEW



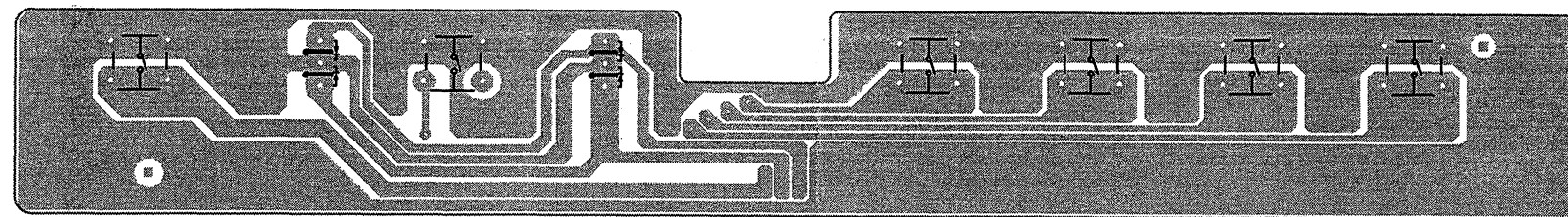
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9.3. CON PCB TOP VIEW



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9.4. CON PCB BOTTOM VIEW

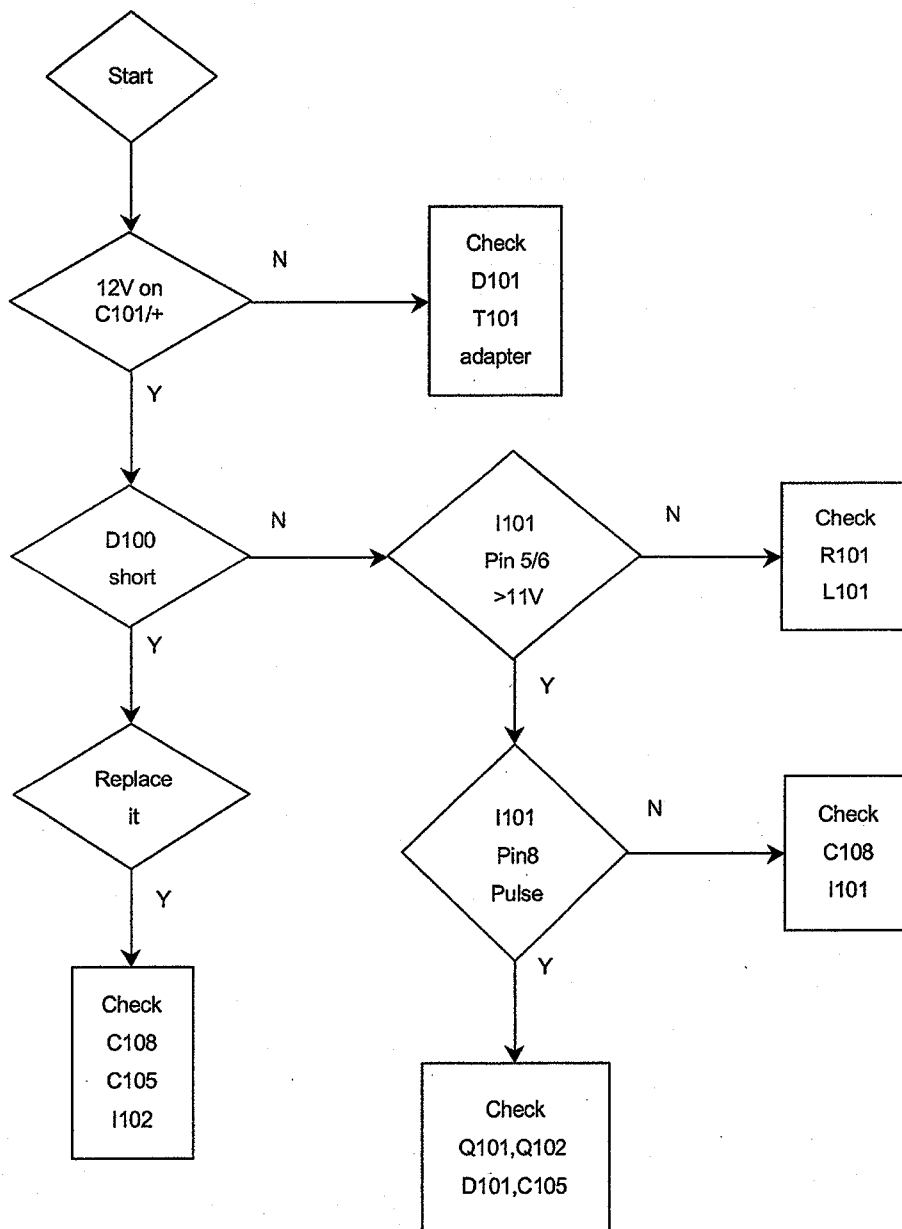


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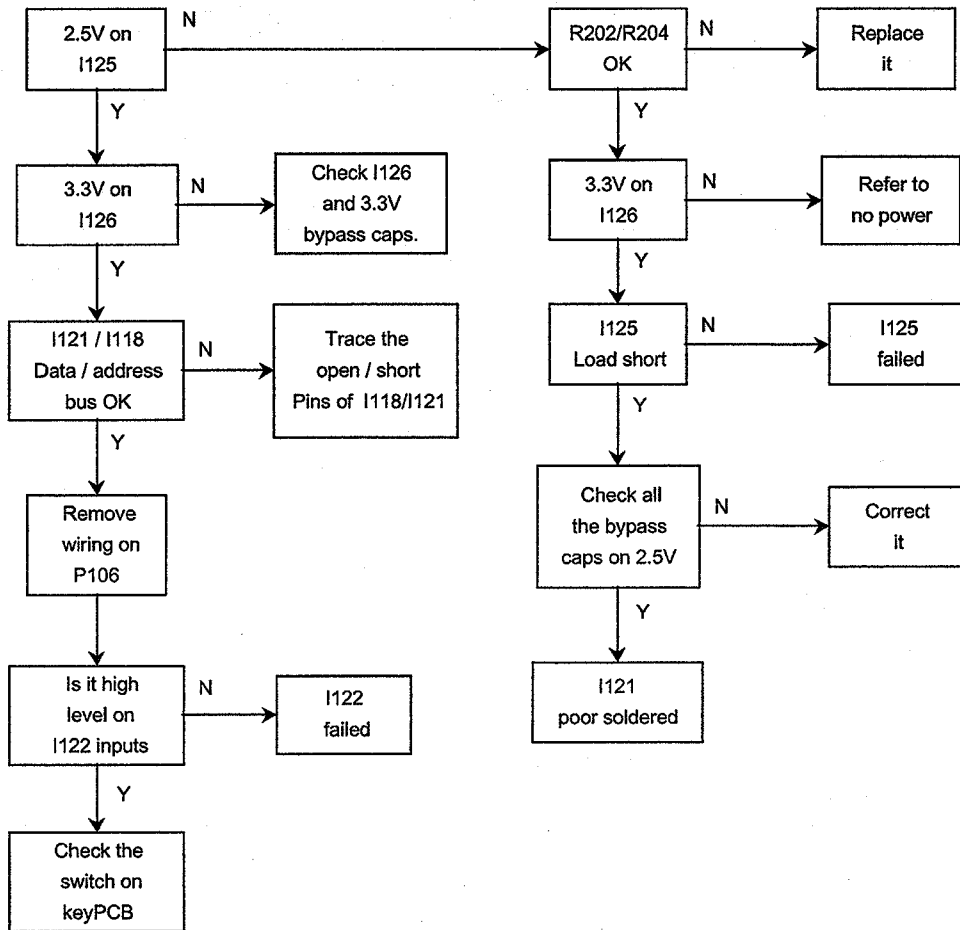
10. TROUBLE SHOOTING FLOW CHART

10.1. NO POWER



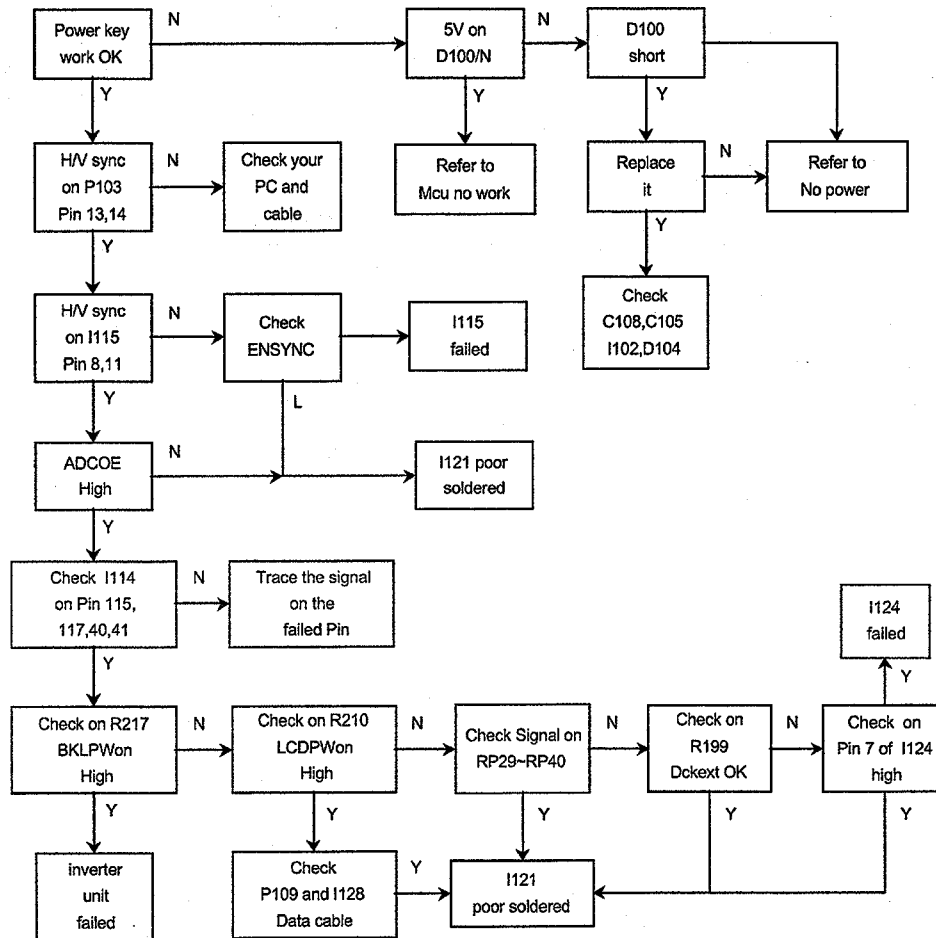
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10.2. MCU NO FUNCTION



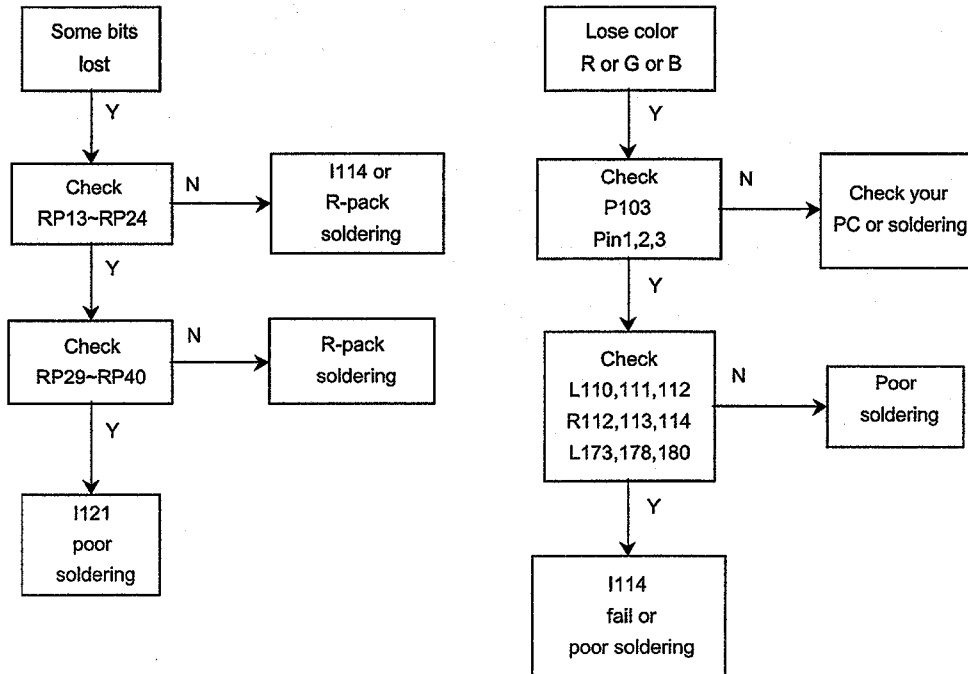
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10.3. NO DISPLAY



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10.4. LOSE COLOR



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11. ADJUSTMENT

11.1. ADJUSTMENT CONDITIONS AND PRECAUTIONS

1. Approximately 30 minutes should be allowed for warm up before proceeding.
2. Adjustments should be undertaken only on those necessary elements since most of them have been carefully preset at the factory.
3. ESD protection is needed before adjustment.

11.2. MAIN ADJUSTMENTS

NO.	FUNCTION	DESIGNATION
1.	WHITE BALANCE	FUNCTION KEY

11.3. ALIGNMENT PROCEDURES

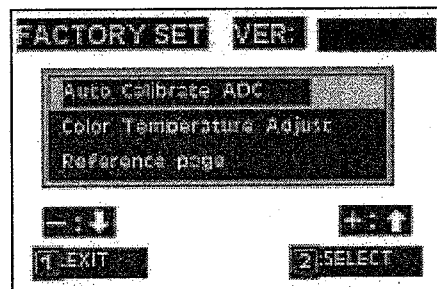
Adjustment Conditions and Precautions:

- (A). Power supply voltage:
AC 110/120V \pm 10% 60 Hz \pm 5%, AC 220/240V \pm 10% 50 Hz \pm 5%.
- (B). Warm up time:
The display must be power ON for at least 30 minutes at full white pattern before starting alignments. This is especially critical in color temperature and white balance adjustments.
- (C). Signals: reference to the front detail specifications and timing table.
Video : reference to the front detail specifications.

1. Adjustment of White Balance:

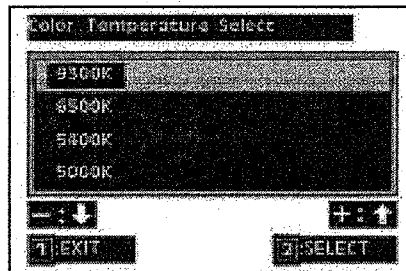
Presetting:

- (a). Warm up time must be over 30 minutes.
- (b). Set 80KHZ 1280x1024 at 16 gray pattern.
- (c). Set up CA110 color analyzer at the center of screen and along a perpendicular to the screen at 20cm from the display.
- (d). Press “ \blacktriangle ”, “ \blacktriangledown ” key and power keys the same time to activate FACTORY SET OSD.
Shown below.

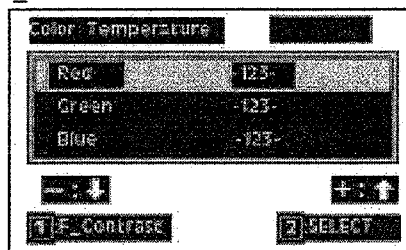


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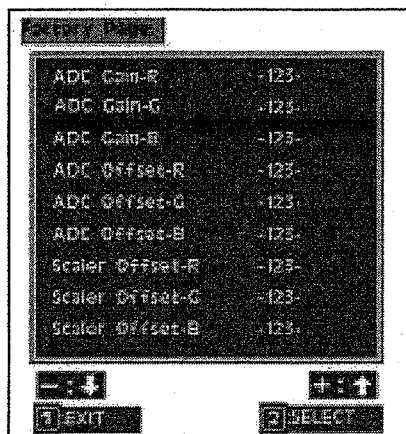
- (e). Do the Auto Calibrate ADC on 16 gray pattern by pressing **⓪** key.
- (f). Press "**▼**" key to move cursor to Color Temperature Select option and do the following presets:
- (g). 9300K, $x = 0.283 \pm 0.02, y = 0.298 \pm 0.02$
 6500K, $x = 0.305 \pm 0.02, y = 0.342 \pm 0.02$
 5400K, $x = 0.332 \pm 0.02, y = 0.342 \pm 0.02$
 5000K, $x = 0.346 \pm 0.02, y = 0.359 \pm 0.02$
 $Y > 170 \text{ cd/m}^2, @6500\text{K}$



- (h). Select one color for preset by **⓪** key, then adjust R,G,B values by "**▲**", "**▼**" keys to meet color chromaticity. Verify the color deviation less then 0.03 by F_Contrast function.



- (i). Exit and save the adjustments by **⓪** key, and do the other presets in same procedures till finishing all.
- (j). Do Not adjust the following Menu, which is only for checking input signal levels.



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12. ELECTRICAL PARTS LIST

When you place a parts order, be sure to indicate the following data on the order:

- Location No.
- Parts No.
- Description

LOC NO.	SOURCE	PART NO.	DESCRIPTION	SPECIFICATION	REMARK
MAIN P.C.BOARD					
C101		2333447701	CAP,MINI ELE 105°C	CE04W 470.000UF 25V	M
C102		2335310812	CAP,MINI ELE 105°C	CE04 1000.000UF 16V	M
C103		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C104		2346110296	CAP,CHIP 125°C	1608X7R 1000.000PF 50V	K
C105		2347410596	CAP,CHIP 85°C	2012Y5V 1.000UF 50V	Z
C106		2336310701	CAP,MINI ELE105°C	CE04W 100.000UF 16V	M
C107		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C108		2346147196	CAP,CHIP 125°C	1608X7R 470.000PF 50V	K
C109		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C110		2335210812	CAP,MINI ELE 105°C	CE04W 1000.000UF 10V	M
C111		2335210812	CAP,MINI ELE 105°C	CE04W 1000.000UF 10V	M
C112		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C113		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C114		2333447701	CAP,MINI ELE 105°C	CE04W 470.000UF 25V	M
C115		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C116		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C117		2341110096	CAP,CHIP 125°C	1608COG 10.000PF 50V	J
C118		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C121		2341110096	CAP,CHIP 125°C	1608COG 10.000PF 50V	J
C122		2341110096	CAP,CHIP 125°C	1608COG 10.000PF 50V	J
C123		2341110096	CAP,CHIP 125°C	1608COG 10.000PF 50V	J
C151		2336310701	CAP,MINI ELE105°C	CE04W 100.000UF 16V	M
C152		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C153		2336347601	CAP,MINI ELE105°C	CE04W 47.000UF 16V	M
C155		2336347601	CAP,MINI ELE105°C	CE04W 47.000UF 16V	M
C156		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C157		2341147096	CAP,CHIP 125°C	1608COG 47.000PF 50V	J
C158		2341147096	CAP,CHIP 125°C	1608COG 47.000PF 50V	J
C159		2346439396	CAP,CHIP 85°C	1608Y5V 0.039UF 50V	Z
C160		2346139296	CAP,CHIP 125°C	1608X7R 3900.000PF 50V	K
C161		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C162		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C163		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C164		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C165		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C166		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C167		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C168		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C169		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C170		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C171		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C172		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C173		2346447396	CAP,CHIP 85°C	1608Y5V 0.047UF 50V	Z
C174		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C175		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C176		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C177		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C178		2346447396	CAP,CHIP 85°C	1608Y5V 0.047UF 50V	Z
C180		2346447396	CAP,CHIP 85°C	1608Y5V 0.047UF 50V	Z
C181		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C182		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C183		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C184		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z
C185		2346410496	CAP,CHIP 85°C	1608Y5V 0.100UF 50V	Z

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LOC NO.	SOURCE	PART NO.	DESCRIPTION	SPECIFICATION			REMARK
C208		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C209		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C210		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C211		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C212		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C213		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C214		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C215		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C216		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C217		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C218		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C219		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C220		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C221		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C222		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C223		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C224		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C225		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C226		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C227		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C228		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C229		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C230		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C231		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C232		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C233		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C234		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C235		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C236		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C237		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C238		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C239		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C240		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C241		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C242		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C243		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C244		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C245		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C246		2336310601	CAP,MINI ELE105°C	CE04W	10.000UF	16V	M
C247		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C248		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C249		2335210812	CAP,MINI ELE 105°C	CE04W	1000.000UF	10V	M
C250		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C251		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C252		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C253		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C254		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C255		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C256		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C257		2333322701	CAP,MINI ELE 105°C	CE04W	220.000UF	16V	M
C258		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C259		233647601	CAP,MINI ELE 105°C	CE04W	47.000UF	50V	M
C260		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C261		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C262		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C263		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M
C264		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C265		2346110296	CAP,CHIP 125°C	1608X7R	1000.000PF	50V	K
C266		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C267		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C268		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C269		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C270		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z
C271		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z

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LOC NO.	SOURCE	PART NO.	DESCRIPTION	SPECIFICATION				REMARK
C272		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C273		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M	
C274		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C275		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C276		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C277		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C278		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C279		2336347601	CAP,MINI ELE105°C	CE04W	47.000UF	16V	M	
C280		2346410496	CAP,CHIP 85°C	1608Y5V	0.100UF	50V	Z	
C311		2336322701	CAP,MINI ELE105°C	CE04W	220.000UF	16V	M	
D100		2364503996	DIODE,ZENER SMD	BZV55-C5V6			PHILIPS	
D101		2364600196	DIODE,SWITCH SMD	LL4148 3.5X1.5 φ			TEMIC GS08	
D102		2364600196	DIODE,SWITCH SMD	LL4148 3.5X1.5 φ			TEMIC GS08	
D103		2364500596	DIODE,ZENER SMD	RLZ11B 10.5-11.05V 0.5W			ROHM	
D104		2368600396	RECT BRIDGE SMD	EA60QC04-TE16F2			NI TO252	
D107		2364600196	DIODE,SWITCH SMD	LL4148 3.5X1.5 φ			TEMIC GS08	
D108		2364600196	DIODE,SWITCH SMD	LL4148 3.5X1.5 φ			TEMIC GS08	
D109		2364600196	DIODE,SWITCH SMD	LL4148 3.5X1.5 φ			TEMIC GS08	
I101		2365914996	IC,DIGITAL SMD	RT9568			RICH TEK SOP8	
I102	RA	2360606296	FET,N-CH(SMD)	HUF76107D3S			INTERSIL	
I102	RB	2365802596	IC,LINEAR(SMD)	IRF7807			IR S008	
I112		2365805296	IC,LINEAR(SMD)	LM1881M			NS	
I113		2365412600	IC,DIGITAL	24LC21A/P			MICROCHIP	
I114		2365913496	IC,DIGITAL SMD	AD9884AKS-140 A.D.			MQFP128	
I115		2365916196	IC,DIGITAL SMD	74LVC126AD			PHILIPS SOP14	
I118		2365914696	IC,DIGITAL SMD	MBM29LV400TC-10			FUJITSU TSOP48	
I119	RA	2365316200	IC,LINEAR	24LC16B			MICROCHI	
I119	RB	2365915896	IC,DIGITAL SMD	24LC16B/SN			MICROCHIP SO08	
I121		2365914396	IC,DIGITAL SMD	PW164-20R PIXELWORKS			BGA256	
I122		2365804096	IC,LINEAR(SMD)	74LVC541A			PHILIPS TSSOP20	
I123		2365913196	IC,DIGITAL SMD	ICS502M			ICS S008	
I124		2365913096	IC,DIGITAL SMD	ICS501M			ICS S008	
I125	RA	2365805196	IC,LINEAR(SMD)	APL1084-UC			ANPEC TO-252	
I125	RB	2365804996	IC,LINEAR(SMD)	US1050CD			UNISEM TO252	
I126		2365804896	IC,LINEAR(SMD)	AMC7585-3.3ST			ST TO263	
I127		2360606896	FET,N-CH(SMD)	IRF7304			IR S08	
I128		2365914596	IC,DIGITAL SMD	SH150A			S.I. TQFP100	
I129		2365913296	IC,DIGITAL SMD	M62334FP			MTSUBISHI S008	
L101		2379620196	BEAD,HI-IMPEDANCE	3216MZ	200.000OHM		I<300MA	
L102		2371110700	COIL,CHOKE	JT156D2 0.23*4 21T 30u				
L108		2379620196	BEAD,HI-IMPEDANCE	3216MZ	200.000OHM		I<300MA	
L109		2379620196	BEAD,HI-IMPEDANCE	3216MZ	200.000OHM		I<300MA	
L110		2253300096	RES,CHIP 1/8	RC 1/8W	0.00	J	T2012	
L111		2253300096	RES,CHIP 1/8	RC 1/8W	0.00	J	T2012	
L112		2253300096	RES,CHIP 1/8	RC 1/8W	0.00	J	T2012	
L114		2379620196	BEAD,HI-IMPEDANCE	3216MZ	200.000OHM		I<300MA	
L115		2379620196	BEAD,HI-IMPEDANCE	3216MZ	200.000OHM		I<300MA	
L116		2379620196	BEAD,HI-IMPEDANCE	3216MZ	200.000OHM		I<300MA	
L125		2379101495	FERRITE CORE	3.5X9X0.8				
P101		2409200400	JACK,DC POWER	Q-JACK00035			LEOCO	
P103		2404381006	CONNECTOR	D-SUB 15P(BLU) PC99			LEOCO	
P106		2404301107	CONNECTOR	S8B-PH-K 8PIN			JST	
P107		2404301003	CONNECTOR	S4B-XH-A 4PIN				
P109		2407610125	SOCKET,SMD	DF14-25P-1.25H			HIROSE	
P110		2404301105	CONNECTOR	S6B-PH-K 6PIN			JST	
Q101	RA	2360100196	XISTOR,PNP R SMD	2SA1037AKR			ROHM SMT3	
Q101	RB	2360100396	XISTOR,PNP R SMD	MMBT3906-7			VISHAY SOT-23	
Q102	RA	2360100196	XISTOR,PNP R SMD	2SA1037AKR			ROHM SMT3	
Q102	RB	2360100396	XISTOR,PNP R SMD	MMBT3906-7			VISHAY SOT-23	
Q403	RA	2360100196	XISTOR,PNP R SMD	2SA1037AKR			ROHM SMT3	
Q403	RB	2360100396	XISTOR,PNP R SMD	MMBT3906-7			VISHAY SOT-23	
Q404	RA	2360300196	XISTOR,NPN R SMD	2SC2412KR			ROHM SMT3	
Q404	RB	2360300296	XISTOR,NPN R SMD	HMBT3904			HI-SIN SOT-23	
Q404	RC	2360300396	XISTOR,NPN R SMD	MMBT3904LT1			MOTOROLA	

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LOC NO.	SOURCE	PART NO.	DESCRIPTION	SPECIFICATION	REMARK
Q404	RD	2360300596	XISTOR,NPN R SMD	MMBT3904-7	VISHAY SOT-23
Q405	RA	2360300196	XISTOR,NPN R SMD	2SC2412KR	ROHM SMT3
Q405	RB	2360300296	XISTOR,NPN R SMD	HMBT3904	HI-SIN SOT-23
Q405	RC	2360300396	XISTOR,NPN R SMD	MMBT3904LT1	MOTOROLA
Q405	RD	2360300596	XISTOR,NPN R SMD	MMBT3904-7	VISHAY SOT-23
Q406	RA	2360300196	XISTOR,NPN R SMD	2SC2412KR	ROHM SMT3
Q406	RB	2360300296	XISTOR,NPN R SMD	HMBT3904	HI-SIN SOT-23
Q406	RC	2360300396	XISTOR,NPN R SMD	MMBT3904LT1	MOTOROLA
Q406	RD	2360300596	XISTOR,NPN R SMD	MMBT3904-7	VISHAY SOT-23
RP13		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP14		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP15		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP16		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP17		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP18		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP19		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP20		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP21		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP22		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP23		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP24		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP29		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP30		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP31		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP32		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP33		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP34		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP35		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP36		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP37		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP38		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP39		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
RP40		2259247008	RES,CHIP NETWORKS	08P*04R 1/16W 47.00 J P=0.8	
R101		2235315895	RES,MTL 1/2	RS 1/2W 0.15 J	T52
R102		2253220196	RES,CHIP 1/10W	RC 1/10W 200.00 J	T1608
R103		2253230296	RES,CHIP 1/10W	RC 1/10W 3.00K J	T1608
R104		2253220296	RES,CHIP 1/10W	RC 1/10W 2.00K J	T1608
R105		2253227496	RES,CHIP 1/10W	RC 1/10W 270.00K J	T1608
R106		2253210296	RES,CHIP 1/10W	RC 1/10W 1.00K J	T1608
R107		2253230296	RES,CHIP 1/10W	RC 1/10W 3.00K J	T1608
R111		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R112		2253210196	RES,CHIP 1/10W	RC 1/10W 100.00 J	T1608
R113		2253210196	RES,CHIP 1/10W	RC 1/10W 100.00 J	T1608
R114		2253210196	RES,CHIP 1/10W	RC 1/10W 100.00 J	T1608
R115		2253210196	RES,CHIP 1/10W	RC 1/10W 100.00 J	T1608
R116		2253268496	RES,CHIP 1/10	RC 1/10W 680.00K J	T1608
R128		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R129		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R130		2253220296	RES,CHIP 1/10W	RC 1/10W 2.00K J	T1608
R131		2253233296	RES,CHIP 1/10W	RC 1/10W 3.30K J	T1608
R133		2253220296	RES,CHIP 1/10W	RC 1/10W 2.00K J	T1608
R134		2253210196	RES,CHIP 1/10W	RC 1/10W 100.00 J	T1608
R135		2253220196	RES,CHIP 1/10W	RC 1/10W 200.00 J	T1608
R136		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R137		2253220196	RES,CHIP 1/10W	RC 1/10W 200.00 J	T1608
R138		2253220196	RES,CHIP 1/10W	RC 1/10W 200.00 J	T1608
R139		2251307506	RES,CHIP 1/8	RC 1/8W 75.00 F	
R140		2251307506	RES,CHIP 1/8	RC 1/8W 75.00 F	
R141		2251307506	RES,CHIP 1/8	RC 1/8W 75.00 F	
R143		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R144		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R145		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R163		2253233296	RES,CHIP 1/10W	RC 1/10W 3.30K J	T1608
R164		2253233296	RES,CHIP 1/10W	RC 1/10W 3.30K J	T1608

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LOC NO.	SOURCE	PART NO.	DESCRIPTION	SPECIFICATION	REMARK
R165		2253233296	RES,CHIP 1/10W	RC 1/10W 3.30K J	T1608
R171		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R172		2253233296	RES,CHIP 1/10W	RC 1/10W 3.30K J	T1608
R173		2253233296	RES,CHIP 1/10W	RC 1/10W 3.30K J	T1608
R174		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R175		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R178		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R180		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R181		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R182		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R183		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R184		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R185		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R186		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R187		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R188		2253247296	RES,CHIP 1/10W	RC 1/10W 4.70K J	T1608
R190		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R193		2253210296	RES,CHIP 1/10W	RC 1/10W 1.00K J	T1608
R194		2253220196	RES,CHIP 1/10W	RC 1/10W 200.00 J	T1608
R195		2253220196	RES,CHIP 1/10W	RC 1/10W 200.00 J	T1608
R196		2253210296	RES,CHIP 1/10W	RC 1/10W 1.00K J	T1608
R197		2253210296	RES,CHIP 1/10W	RC 1/10W 1.00K J	T1608
R198		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R199		2253210196	RES,CHIP 1/10W	RC 1/10W 100.00 J	T1608
R200		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R202		2253247196	RES,CHIP 1/10W	RC 1/10W 470.00 J	T1608
R203		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R204		2253247196	RES,CHIP 1/10W	RC 1/10W 470.00 J	T1608
R205		2253275196	RES,CHIP 1/10W	RC 1/10W 750.00 J	T1608
R206		2253247296	RES,CHIP 1/10W	RC 1/10W 4.70K J	T1608
R207		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R209		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R210		2253247096	RES,CHIP 1/10W	RC 1/10W 47.00 J	T1608
R211		2253247296	RES,CHIP 1/10W	RC 1/10W 4.70K J	T1608
R212		2253210396	RES,CHIP 1/10W	RC 1/10W 10.00K J	T1608
R217		2253210296	RES,CHIP 1/10W	RC 1/10W 1.00K J	T1608
R218		2253210296	RES,CHIP 1/10W	RC 1/10W 1.00K J	T1608
T101		2370100296	COIL CHOKE SMD	10*8*5 700/100M 4A Rdc<45mOHM	
U001		2202506600	PCB MULTILAYER	JT177K MAIN FR4*4 190X150	
X302		2369103901	XTAL,OSC	XTAL 24.576MHZ HC-49/US CL 30P	
X303		2369102901	XTAL,OSC	14.31818MHZ AT-49 CL30P	

CON P.C.BOARD

D702	2363703800	LED	EL 209YGW	EVERLIGHT
P701	2404301107	CONNECTOR	S8B-PH-K 8PIN	JST
S702	2403701500	SWITCH,PU-TC	SKHHAL2420-SV	FORWARD
S703	2403701500	SWITCH,PU-TC	SKHHAL2420-SV	FORWARD
S704	2403701500	SWITCH,PU-TC	SKHHAL2420-SV	FORWARD
S705	2403701500	SWITCH,PU-TC	SKHHAL2420-SV	FORWARD
S707	2403701500	SWITCH,PU-TC	SKHHAL2420-SV	FORWARD
U701	2202506200	PCB MULTILAYER	JT177K CON FR4*2 175X23	

OTHERS

P951	2427130014	POWER CORD	H05VV-F3*0.75 VDE WALL 1.83M	(for VE170 EU)
P952	2427130003	POWER CORD	SVT 18/3C IVORY 1.83M	(for VE170 USA)
P951	2427130047	POWER CORD	EU WALL 1.8M HP LCD	(for VE170b)
P952	2427130046	POWER CORD	USA WALL 1.8M HP LCD	(for VE170b)
P961	2427501113	I/O CABLE	D15M*2 6+3C 1.8M RAL7035	(for VE170)
P961	2427501118	I/O CABLE	D15M*2 6+3C 1.83M BLACK PC99	(for VE170b)
P980	2427412577	WIRE HARNESS	DF14-25S/JAE-W31S 2725#28 100L	
P981	2427412579	WIRE HARNESS	JST-PHR-8P*2 1061#28 300L	
P982	2427412578	WIRE HARNESS	JST-PHR-6*2 1007#28 150L	

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LOC NO.	SOURCE	PART NO.	DESCRIPTION	SPECIFICATION	REMARK
U901	RA	2414500400	INVERTER	PLCD07174	LINK COM
U901	RB	2414500500	INVERTER	HIN402D*35	HJC
V901		2212001100	LCD ASS'Y	LT170E2-132	SAMSUNG
Y901	RA	2414102100	AC ADAPTER	DC12V 43W P/S<1V RAL7035 ABEL	(for VE170)
Y901	RB	2414102400	AC ADAPTER	DC12V 50W P/S<1 (V.S)HJ	(for VE170)
Y901	RC	2414102600	AC ADAPTER	DC12V 50W P/S<1 (V.S)LSE	(for VE170)
Y901	RA	2414101900	AC ADAPTER	AC100-240V DC12V 3.6A BLK ACBL	(for VE170b)
Y901	RB	2414103000	AC ADAPTER	DC12V 50W P/S<1 BLK(V.S.) LSE	(for VE170b)
Y901	RC	2414102900	AC ADAPTER	DC12V 50W P/S<1 BLK(VS) HJC	(for VE170b)